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(54) TEMPERATURE DETECTOR, CHARGE TRANSFER DEVICE MOUNTING IT, AND CAMERA

(57) Abstract:
PROBLEM TO BE SOLVED: To realize an on-chip temperature detector so as to precisely detect the temperature of a device to measure by a method wherein the temperature of a device is detected taking advantage of a dark current induced in a charge transfer section.
SOLUTION: In a reset pulse generating circuit 16, reset pulses ϕrs are generated before signal charge is transferred while signal is steadily outputted, and on the other hand, reset pulses ϕrs are generated as much thinned out while temperature detection is carried out. Therefore, the dark current charge of charge transfer registers 14 is transferred, collected at a floating, diffusion, and added together, so that a large dark current can be obtained. The output voltage of a charge voltage converter 17 is led out as a signal voltage while signal charge is transferred, and the output voltage of a charge voltage converter 17 is led out as a temperature detection voltage while no signal charge is transferred. By this setup, an on-chip temperature detector can be realized, so that the temperature of a device to measure can be accurately detected.